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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,231

03/09/2004

Marc Husemann

101769-268 /tesa1649

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27386

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03/11/2011

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EXAMINER

NERANGIS, VICKEY MARIE

ART UNIT

PAPER NUMBER

1762

MAIL DATE

DELIVERY MODE

03/11/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,231	HUSEMANN ET AL.	
	Examiner	Art Unit	
	Vickey Nerangis	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-9,11-13 and 15-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-9,11-13 and 15-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/4/2011 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. All outstanding rejections, except for those maintained below, are withdrawn in light of applicant's amendment filed on 1/4/2011.

Claim Rejections - 35 USC § 103

4. Claims 1, 2, 5-9, 11-13, 15, 17, 18, 22-29, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma (JP 09-286958) in view of Parsons (US 5,851,663).

Azuma discloses a flame retardant tacky film and tape comprising 100 parts by weight (pbw) acrylic based polymer that is copolymerized with vinyl monomers such as other acrylates as well as N-vinyl pyrrolidones, acrylamides, anhydrides, acrylonitrile, and the like (paragraphs 0014-0016) and 5-70 parts by weight of ammonium polyphosphate flame retardant having molecular weight of 200-1000 (paragraph 0017).

Azuma teaches the addition of a tackifier (paragraph 0029) but fails to teach the amount and type of tackifier.

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Parsons discloses adhesive compositions which utilize tackifiers including hydrogenated resins, glyceryl esters, terpene, and pheonolic resin in an amount of 40-150 parts by weight per 100 parts by weight of base material (col. 4, lines 13-32). In the examples, the adhesive comprises at most about 26 wt % rosin ester tackifier and 29 wt % flame retardant (cols. 17 and 18, Adhesive C). See calculation below in "Response to Arguments" section.

Given that Azuma discloses the use of tackifiers in its adhesive tape and further given that pressure sensitive adhesives can include tackifiers like claimed in an amount of 40-150 parts by weight as taught by Parsons, it would have been obvious to one of ordinary skill in the art to utilize the claimed tackifiers in claimed amounts, absent a showing of unexpected and surprising results.

5. Claims 1, 2, 5-8, 11-13, 15, 18-29, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons (US 5,851,663).

Parsons discloses flame retardant pressure-sensitive adhesives and tapes comprising acrylic adhesive such as those based on acrylic acid, acrylamide, and acrylonitrile and 10-60 wt % of a non-halogen flame retardant such as ammonium polyphosphate (claims 1, 4, and 5). Parsons exemplifies a composition comprising a copolymer of 2-ethylhexyl acrylate and acrylic acid, a hydrogenated rosin ester tackifier in an amount of about 37 wt % (calculated from starting amounts in col. 16, line 65 to col. 17, line 5 based on solids content), and 30-50 phr P-40 flame retardant that is ammonium polyphosphate (col. 13, lines 65-67), wherein the composition is applied to a silicone treated paper release liner and dried (col. 17, lines 18-25). In col. 4, lines 13-32, Parsons teaches other tackifiers such as glyceryl esters, terpene, and phenolic resins in an

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amount of 40-150 parts by weight per 100 parts by weight of base material. In col. 3, line 34 to col. 4, line 6, Parsons teaches other suitable and common ways of mixing the flame retardant into the adhesive and applying the adhesive to various substrates such as metal, cloth, etc by extrusion and knife-coating.

While Parsons teaches that the composition is dried (i.e., solvent removed), it fails to explicitly disclose the amount of residual solvent remaining like claimed.

Even so, given that Parsons discloses drying the composition, it would have been obvious to one of ordinary skill in the art to dry in the composition in such a way so that negligible amounts of solvent (including amounts like presently claimed amount of up to 0.5 wt %) remain in the composition.

With respect to claim 5, case laws holds that if there is no evidence in the record pointing to any critical significance in a claimed molecular weight then the claims are not patentable over the prior art. In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969). Should applicant argue criticality of molecular weight, it will be noted that applicant's examples do not indicate or suggest a critical molecular weight. Such data has little to no probative value.

With respect to claim 29, this claim which further limits vinyl compounds does not exclude the alternative embodiment of vinyl esters. Since the latter embodiment is disclosed by Parsons as discussed above, it is proper to include claim 29 in this rejection.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons (US 5,851,663) in view of Sakurai (US 6,893,583).

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The discussion with respect to Parsons in paragraph 5 above is incorporated here by reference.

Parsons fails to disclose comonomers that include cycloalkyl groups in the acrylic adhesive component.

Sakurai discloses a flame-retardant hot melt adhesive and teaches that the adhesive polymer include a comonomer with a glass transition temperature of its homopolymer exceeding 0°C in order to improve adhesive properties (col. 4, lines 57-65). These monomers include cyclohexyl methacrylate (col. 5, lines 7-8).

Given that Parsons discloses acrylic adhesives and further given that the adhesive properties are improved in an acrylic adhesive if a cyclohexyl methacrylate is included as taught by Sakurai, it would have been obvious to one of ordinary skill in the art to utilize a comonomer with a cycloalkyl group in the acrylic adhesive of Parsons.

7. Claims 16, 17, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons (US 5,851,663) in view of Everaerts (US 5,648,425).

The discussion with respect to Parsons in paragraph 5 above is incorporated here by reference.

Parsons fails to disclose crosslinking monomer that is photoinitiated.

Everaerts discloses acrylic pressure sensitive adhesives and teaches that crosslinkers such as benzophenone-crosslinking agents are added to enhance cohesive strength (col. 6, lines 22-26).

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Given that Parsons discloses acrylic pressure sensitive adhesives and further given that Everaerts teaches that the cohesive strength of acrylic pressure sensitive adhesives are improved by the addition of benzophenone-crosslinking agents, it would have been obvious to one of ordinary skill in the art to utilize the crosslinking monomers like claimed in the composition of Parsons.

Response to Arguments

8. Applicant's arguments filed 1/4/2011 have been fully considered but they are not persuasive. Specifically, applicant argues that Parsons fails to disclose an amount of tackifying resin of at least 25 wt %.

Parsons clearly teaches the claimed amounts in the Adhesive C in col. 16, line 65 to col. 17, line 5 as calculated by examiner based on solids content (Parsons teaches removing the solvent to form the claimed adhesive with claimed amount of solvent), which is based on 76.1 parts by weight of copolymer solution containing 25 wt % solids and 23.9 parts by weight of solution containing 46.96 wt % tackifier being combined with flame retardant P-40 in an amount of up to 50 phr (Table in col. 17). The amount of tackifying resin is at most 37 wt %. When combined with 40 phr flame retardant, the amount of tackifying resin is 26 wt % and the amount of flame retardant is 29 wt % based on the amount of adhesive.

Conclusion

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Nerangis whose telephone number is (571) 272-2701.

The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

vn

/Vickey Nerangis/
Primary Examiner, Art Unit 1762